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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,790	10/29/2001	Thomas A. Darnell	32166	7345

23589 7590 04/22/2004

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EXAMINER

BELLINGER, JASON R

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/029,790

Applicant(s)

DARNELL, THOMAS A.

Examiner

Jason R Bellinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-35, 37-44 and 48-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-28 and 49-51 is/are allowed.
- 6) ☒ Claim(s) 9-22, 24, 25, 29-35, 38-40, 42 and 43 is/are rejected.
- 7) ☒ Claim(s) 23, 37, 41, 44 and 48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first bead lock ring being "adjustable" and in "adjustable cooperation" with the second bead lock surface of the wheel half must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 9 and 29 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a modular multi-piece wheel having beads locks and a mud cover, does not reasonably provide enablement for the first bead lock ring being "adjustable" with the second bead lock surface of the wheel. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. In the instant case, the specification does not disclose the first bead lock ring being "adjustable" and "adjustably cooperative with the second bead lock surface of the

wheel. Furthermore, it is unclear how the first bead lock ring is "adjustable" as shown in the drawings and described in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claim 48 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 48 recites the limitation "the mud plug" in line 7. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 9, 16, 22, 29, 40, and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Lipper. Lipper shows a modular wheel having an inboard wheel half 12, an outboard half 14, and a center section 12a interposed between and separably coupled with the inboard and outboard wheel halves (12 and 14, respectively). A first bead lock ring 18 has a first bead lock surface 18a, and the wheel further has a second

bead lock surface 14a, such that the two bead lock surfaces act to seal a tire bead therebetween. As best understood, the first bead lock ring 18 adjustably cooperates with the second bead lock surface 14a of the wheel due to the fact that it is connected with bolts 20, which may be tightened or loosened depending upon the size of the tire bead, tightness required, etc.

The center portion 12a is formed from aluminum (see column 3, lines 39-41). The first bead lock surface 18a presents a first portion of an alignment mechanism, while the second bead lock surface 14a presents a second portion of the alignment mechanism. Both alignment mechanisms cooperate to align a first bolt hole 30 in the first bead lock surface 18a with a second bolt hole 28 in the second bead lock surface 14a. The portion of the alignment mechanism of each bead lock surface is considered to be the corresponding bolt holes (30 & 28), which are actually aligned by means of the bolt 20.

The bead lock ring 18 includes an outer surface 18b, wherein the bolt hole 30 is countersunk within the outer surface 18b.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper. Lipper does not state that the hole of the bead lock surface of the wheel is threaded. However, one of ordinary skill in the art at the time of the invention would have found it obvious to provide the hole with internal threads for the purpose of more securely fastening the bolt to the wheel.

11. Claims 10-12, 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper in view of Imamura. Lipper contains all of the limitations as set forth in paragraph 8 above, but does not show the wheel halves having reinforcing ribs or the inboard wheel half having a tire bead retention rib on its surface.

In Figures 2 & 3, Imamura teaches a modular wheel having an inboard wheel half 20a includes a plurality of stiffening ribs 24a, and includes a circumferential raised rib 27a operable to facilitate retaining a tire on the wheel. The outboard wheel half 40a includes a plurality of stiffening ribs 44a also. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the wheel of Lipper with stiffening ribs and a tire retaining rib for the purpose of increasing the strength of the wheel and preventing unseating of the tire during operation.

12. Claims 13-15, 18-19, 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper in view of Ridha. Lipper contains all of the limitations as set

forth in paragraph 8 above, but does not set forth a wheel formed from a reinforced polymer.

Ridha teaches the use of a wheel comprised of a reinforced polymer with up to approximately 50% fiber reinforcement (see column 3, lines 9-12). The wheel may be formed from nylon (see column 3, lines 1-4), while the reinforcing fibers are glass fibers.

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to produce the wheel of Lipper of a fiber reinforced plastic wheel for the purpose of providing a wheel having superior corrosion resistance and light weight compared to a metal wheel, and yet retain the same (or better) strength and wear resistance as a metal wheel.

Lipper as modified by Ridha shows a wheel having a center section 12a constructed from a polymer, and further having a compression limiting insert 24.

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper in view of Mason. Lipper does not show the center section of the wheel being formed from magnesium.

Mason teaches the use of a multi-piece wheel having a section constructed from magnesium, while other sections of the wheel are formed from aluminum or steel.

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to produce the wheel of Lipper with a center section constructed of magnesium for the purpose of providing a lightweight wheel, with corrosion resisting properties.

14. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper in view of Weld. Lipper does not show the center section having contact surfaces that correspond to each inboard and outboard wheel half, respectively, wherein each contact surface includes a groove for receiving a seal.

A best shown in Figure 3, Weld teaches the use of a multi-piece wheel having inboard and outboard wheel halves (2 & 3, respectively), and a center section 14 secured between the wheel halves. The center section 14 has contact surfaces, which contact each wheel half (2 & 3), and further includes grooves 40 for receiving an o-ring seal (41 & 42).

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to produce the center section of Lipper with a groove on each wheel half contact surface to receive a seal, for the purpose of preventing debris, moisture, etc. from entering between the different joined sections of the wheel, and thus preventing undue corrosion and failure of the wheel connection.

While Weld does not disclose the seal being a dynamic u-cup type seal, one of ordinary skill in the art that dynamic u-cup seals serve the same function as o-ring seals; and thus would be readily substituted for an o-ring seal as an equivalent dependent upon availability and cost.

15. Claims 24-25, 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper in view of Kachler. Lipper does not show a wheel having a mud plug



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positioned within the outboard wheel half, secured by a quick-release fastener, to prevent mud and debris from entering the wheel.

Kachler teaches the use of a mud plug 24 secured to an outboard wheel half of a wheel by a quick-release fastener 32. The mud plug 24 prevents the entry of mud and other debris into the wheel.

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the wheel of Lipper with a mud plug (or wheel cover) for the purpose of preventing debris, mud, etc. from entering the wheel.

***Allowable Subject Matter***

16. Claims 26-28 and 49-51 have been found to be allowable over the prior art.
17. Claims 41 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
18. Claims 23 and 37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
19. Claim 48 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

***Response to Arguments***

20. Applicant's arguments filed 8 January 2004 have been fully considered but they are not persuasive. With respect to the applicant's argument that a primary examiner is required to sign an action that includes a rejection of a previously claim indicated as allowable, a Supervisory Patent Examiner is sufficient to meet the requirements set forth in MPEP §1004 & 1005.

Regarding the applicant's argument that the Lipper reference does not meet the pending claims, the Lipper reference may still be considered a three-piece wheel due to that fact that it is clearly assembled from three separate pieces. The fact that the inboard and outboard wheel halves (12 and 14) are connected by rivets does not mean that they are not separably couple, since the rivets could be removed. Therefore Lipper is still considered to meet the limitations of the claims.

Claims 41-44 were inadvertently left untreated in the previous office action. These claims have now been treated.

21. In response to applicant's argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

In the previous office action, the independent claims and some dependent claims were rejected separately by more than one reference due to the fact that each reference

met the independent claims, some dependent claims, AND differing dependent claims.

It was therefore necessary to utilize more than one reference to reject the claims.

22. Applicant's arguments, see pages 19-21, filed 8 January 2004, with respect to the rejection(s) of claim(s) 9-12, 16 and 23 under Imamura; and claims 29, 31, 33-34, and 37 under Rooney have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lipper.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R Bellinger whose telephone number is 703-308-6298. The examiner can normally be reached on Mon - Thurs (9:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger  
Examiner  
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